I urge the FCC to safeguard Internet freedom by keeping the bright-line net neutrality protections in place and upholding Title II. The FCC should, therefore, throw out Chairman Ajit Pai's plan to hand the ISP monopolies such as Comcast.

In the history of oversight of the communications industry, two models work: bona fide competition and regulated monopoly, with a strong preference for bona fide competition. In the present environment, "last mile" ISP service to consumers and small/medium-sized businesses is a clear monopoly situation. Removing the net neutrality protections would grant an unregulated monopoly situation to these ISPs.

As a resident of a county in Virginia, my local cable provider (in my case, Comcast) is the only company in a position to provide good Internet service. This de-facto monopoly is strengthened, of course, by local government decisions that confirm this monopoly situation. There is, indeed, a strong legitimate argument for recognizing the "natural monopoly" of a cable TV company in a given locality. But such monopolies must be regulated carefully, and with restraint, to avoid this monopoly situation from becoming perverse.

The best way to preserve Internet freedom is to preserve net neutrality so that the Internet continues to be an amazingly effective infrastructure through which innovative services of great economic value are offered to the public. Net neutrality encourages this freedom by removing barriers to new entrants to the wide variety of information services enabled by the Internet.

Removing net neutrality would allow business deals between (in my case) Comcast and a limited number of information providers in a way that would limit the freedom of other information providers and, equally important, limit my freedom to choose among those providers.

Given the history of the TV industry and the cable TV industry, it is easy to see how the cable TV companies, who now find themselves in the situation of being de-facto monopoly ISPs for residential and small/medium-sized businesses, like the idea of getting "in the middle" between the consumer and specific information providers. This mirrors, after all, the classic late-20th-century situation of the cable TV company providing access to specific TV channels and to "packages" of such channels. This model, natural for a cable TV company, is antithetical to the inner logic of the Internet, in which fast, economical, and intentionally "dumb" plumbing powerfully enables innovation of services and use of those services by consumers.

I base these comments on decades of professional experience in Internet engineering, primarily in the research university context. In a variety of settings, it appeared to be the case that meeting the needs of new applications would require technologies such as "Quality of Service" or "virtual circuits" in which the plumbing itself would be aware of specific service providers. In case after case, the complexities of such plumbing proved much more problematic. Further, after even a few years of continued advance in the performance of simpler plumbing, it was seen that the intended advantages could be provided by keeping with intentionally fast and "dumb" infrastructure. Monopoly ISPs, can, unfortunately, pass on the costs of overly complex infrastructure to their consumers. But this defeats any national economic goal.

But my argument is by no means only technical. The history of cable TV providers gravitating to providing "premium" "packages" of channels, combined with their current situation as de-facto monopolies, threatens to weaken the value of the Internet to continue to serve as an engine of growth in American society.